



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/564,851	01/17/2006	Koichi Morinaga	1034232-000005	5136

21839 7590 03/22/2007  
BUCHANAN, INGERSOLL & ROONEY PC  
POST OFFICE BOX 1404  
ALEXANDRIA, VA 22313-1404

EXAMINER
----------

PAK, JOHN D

ART UNIT	PAPER NUMBER
----------	--------------

1616

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/22/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/564,851

Applicant(s)

MORINAGA ET AL.

Examiner

JOHN PAK

Art Unit

1616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 1/06
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

Claims 1-6 are pending in this application.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshikawa et al. (US 5,747,518) in view of the acknowledged prior art, HCAPLUS abstract 1961:10180 and Kurita et al. (US 5,863,909).

Yoshikawa et al. establish the fungicidal activity of the compound set forth in applicant's claim 1 (i.e. penthiopyrad). See the paragraph bridging paragraphs 1-2; Example 14 on columns 26-27; Compound No. 1.13 in Table 5; columns 17-19. Numerous surfactants and other types of adjuvants, including polyoxyalkylene type surfactants and others for dispersing, emulsifying, spreading, binding or stabilizing functions, are disclosed (column 19, lines 8-38). Flowable and emulsifiable concentrate formulations with liquid carriers are disclosed, as are applications by spraying (column 18, line 40 to column 19, line 3; column 19, lines 39-67).

Applicant acknowledges the following in the instant specification:

(1) "Flowable" formulations are aqueous suspensions that are becoming mainstream of agrichemical formulations for foliar application due to less exposure to workers to dust (p. 1, lines 14-20).

(2) Penthiopyrad "exhibits an excellent effect on a wide variety of diseases," is water insoluble, and "has been studied for using the compound for foliar application" (p. 2, lines 7-14).

HCAPLUS abstract 1961:10180 discloses spray materials containing oxyethylated resinic acids. Reaction products of one mole resinic acid such as abietic or rosin, with 4-6 moles ethylene oxide, improve the adhesion of dried solution of pesticides to parts of plants.

Kurita et al. disclose polyoxyalkylated rosin acids as adjuvants for agrochemicals (claims 5-12; column 3, line 42 to column 4, line 12). Nomenclature usage is disclosed, wherein polyethoxylated rosin, polyethoxylated rosin acid, polyethoxylated rosin ether, polyethoxylated rosin acid ether, and polyethoxylated rosin acid ester are considered equivalent terminology (column 15, lines 40-49). 5 mole alkylene oxide per mole of rosin is disclosed (claims 6-8).

The difference between the claimed invention and the cited references is that the references do not expressly disclose a specific aqueous suspension formulation that contains penthiopyrad with a polyoxyalkylene resin acid ester, as claimed. However, it has been established through Yoshikawa et al. and applicant's acknowledged prior art that penthiopyrad is an excellent fungicide, which can be formulated as an aqueous suspension formulation. Further, polyoxyalkylated rosin acid esters are known adjuvants for agrochemicals, and those that contain 4-6 moles of ethylene oxide per

mole of rosin would have been expected to provide improved adhesion properties to a pesticidal formulation containing them (HCAPLUS abstract 1961:10180).

Applicant's claimed feature of HLB 2-13 calculated as shown in the formula of claim 5 is noted, but it is the Examiner's position that the rosin acid material suggested by HCAPLUS abstract 1961:10180 would meet said feature. Simple calculation for 4 moles of EO (168 mw) and using abietic acid (302.5 mw) as calculation substitute for rosin acid gives HLB of about 7.

As for the 1-70 parts by weight polyoxyalkylene resin acid ester feature in claim 6, it is the Examiner's position that such feature has little meaning in the absence of information as to what the total parts are. Given the formulation teachings in Yoshikawa et al. in view of the secondary teachings cited herein, one having ordinary skill in the art would have been motivated to formulate penthiopyrad with sufficient amounts of adjuvants such as polyoxyalkylene resin acid ester to meet the feature of applicant's claim 6.

Therefore, the claimed invention, as a whole, would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, because every element of the invention and the claimed invention as a whole have been fairly disclosed or suggested by the teachings of the cited references.

Applicant's specification data has been reviewed in this regard but the data is far from being commensurate in scope with that of the claimed subject matter. Evidence of

Art Unit: 1616

nonobviousness, if any, must be commensurate in scope with that of the claimed subject matter. In re Kulling, 14 USPQ2d 1056, 1058 (Fed. Cir. 1990); In re Lindner, 173 USPQ 356, 358 (CCPA 1972).

The following is a comparison of the scope of applicant's specification data and the scope of applicant's claims:

	Specification Data	Scope of the Claims
Polyoxyalkylene in the resin acid ester	3-15 EO  12 EO + 6 PO 12 EO + 12 EO 3 EO + 3 PO	Claims 1 and 6 have no limit on what "polyoxyalkylene" can be  Claims 1-3 and 5-6 have no limit on number of moles of EO, PO or polyoxyalkylene.
Resin acid	Rosin acid	Can be any resin acid, not just rosin acid.
Amount of the ingredients in a formulation	5 wt% of penthiopyrad  15-40 wt% of specific polyoxyalkylene resin acid esters	No wt. limit on penthiopyrad  No wt. limit on any polyoxyalkylene resin acid esters. Note in claim 6, the parts by weight feature is meaningless unless the total weight by parts of the formulation is fixed.
Other ingredients	Various additional ingredients are included in the tested invention formulations, such as Na salt of naphthalenesulfonic acid formaldehyde condensate, polyoxyethylene aryl phenyl ether, propylene glycol, xanthan gum.	No other ingredients are required by the claims.

Moreover, data for 15 EO (Comparative Example 2) appears less than unexpected, but such rosin acid ester appears to read on the broad claims of this application. Additionally, data for Example 2 would have been expected in view of HCAPLUS abstract 1961:10180. Last, the test example formulations contained up to 40 wt% more adjuvants, whereas the comparative formulations contained corresponding amount of water. Hence, it is not unexpected that a formulation that contains significant amounts of more water would run off more after rainfall.

Therefore, applicant's data falls far short of being commensurate in scope with that of the claims. Consequently, this ground of rejection is deemed proper.

Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshikawa et al. (US 5,747,518) in view of the acknowledged prior art.

Yoshikawa et al. establish the fungicidal activity of the compound set forth in applicant's claim 1 (i.e. penthiopyrad). See the paragraph bridging paragraphs 1-2; Example 14 on columns 26-27; Compound No. 1.13 in Table 5; columns 17-19. Flowable and emulsifiable concentrate formulations with liquid carriers are disclosed, as are applications by spraying (column 18, line 40 to column 19, line 3; column 19, lines 39-67). Liquid carriers include "kerosine, mineral oil and other paraffin hydrocarbons" (column 18, lines 64-66). Numerous types of adjuvants for dispersing, emulsifying, spreading, binding or stabilizing functions are disclosed (column 19, lines 8-38).

Applicant acknowledges the following in the instant specification:

(1) "Flowable" formulations are aqueous suspensions that are becoming mainstream of agrichemical formulations for foliar application due to less exposure to workers to dust (p. 1, lines 14-20).

(2) Penthiopyrad "exhibits an excellent effect on a wide variety of diseases," is water insoluble, and "has been studied for using the compound for foliar application" (p. 2, lines 7-14).

The difference between the claimed invention and the cited references is that the references do not expressly disclose a specific aqueous suspension formulation that contains penthiopyrad with a liquid paraffin, as claimed. However, it has been established through Yoshikawa et al. and applicant's acknowledged prior art that penthiopyrad is an excellent fungicide, which can be formulated as an aqueous suspension formulation. Further, Yoshikawa et al. clearly teach the use of liquid paraffins such as kerosine, mineral oil and other paraffin hydrocarbons to formulate the insoluble penthiopyrad, in addition to using other adjuvant ingredients to arrive at a suitable flowable formulation.

Therefore, the claimed invention, as a whole, would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, because every element of the invention and the claimed invention as a whole have been fairly disclosed or suggested by the teachings of the cited reference.



In this regard, it is noted that dependent claims 2-6 do not actually require the selection of a polyoxyalkylene resin acid ester. Said claims provide mere further description of features of an ingredient that has not been expressly selected. Hence, all such dependent claims read on selection of liquid paraffin as the formulation adjuvant to penthiopyrad.

It is noted again that the parts by weight feature of claim 6 is virtually meaningless in the absence of information pertaining to the total weight by parts of the formulation. Further, it is the Examiner's position that given the formulation teachings in Yoshikawa et al. in view of the applicant's acknowledged prior art, one having ordinary skill in the art would have been motivated to formulate penthiopyrad with sufficient amounts of liquid paraffin to arrive at the feature of applicant's claim 6.

As for applicant's specification data directed to liquid paraffin, it must be stated again that the data is not commensurate in scope with that of the claimed subject matter. Similar to the discussion set forth in the preceding ground of rejection, the claimed liquid paraffin is far broader than the two specific liquid paraffins tested in Examples 8-10, the claims have no weight limits on the liquid paraffins whereas only 20-40 wt% concentration was tested, and the tested formulations contained much more water, which would lead to the expectation that there would be more runoff after rainfall when all else is held constant.

For these reasons, this ground of rejection is deemed to be proper.


Any inquiry concerning this communication or earlier communications from the Examiner should be directed to JOHN PAK whose telephone number is **(571)272-0620**. The Examiner can normally be reached on Monday to Friday from 8 AM to 4:30 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's SPE, Johann Richter, can be reached on **(571)272-0646**.

The fax phone number for the organization where this application or proceeding is assigned is **(571)273-8300**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)272-1600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
John Pak  
Primary Examiner  
Technology Center 1600